

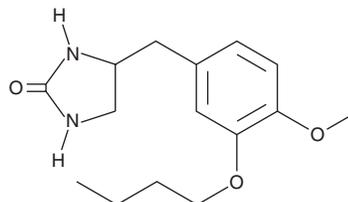
PRODUCT INFORMATION



Ro 20-1724

Item No. 18272

CAS Registry No.: 29925-17-5
Formal Name: 4-[(3-butoxy-4-methoxyphenyl)methyl]-2-imidazolidinone
Synonym: 4-(3-Butoxy-4-methoxybenzyl)-2-imidazolidinone
MF: C₁₅H₂₂N₂O₃
FW: 278.4
Purity: ≥95%
UV/Vis.: λ_{max}: 230, 280 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Ro 20-1724 is supplied as a crystalline solid. A stock solution may be made by dissolving the Ro 20-1724 in the solvent of choice, which should be purged with an inert gas. Ro 20-1724 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of Ro 20-1724 in ethanol and DMSO is approximately 25 mg/ml and approximately 30 mg/ml in DMF.

Ro 20-1724 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Ro 20-1724 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Ro 20-1724 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Ro 20-1724 is a cell-permeable, cAMP-specific phosphodiesterase type IV (PDE4) inhibitor (IC₅₀ = 2 μM).^{1,2} It weakly inhibits PDE3 with a K_i value greater than 25 μM.¹ Ro 20-1724 inhibits the release of cytokines and other inflammatory signals as well as prevents the development of reactive oxygen species.³ It is often used to study cAMP-related functions in vascular cells.⁴

References

1. Reeves, M.L., Leigh, B.K., and England, P.J. The identification of a new cyclic nucleotide phosphodiesterase activity in human and guinea-pig cardiac ventricle. Implications for the mechanism of action of selective phosphodiesterase inhibitors. *Biochem. J.* **241**, 535-541 (1987).
2. Soderling, S.H., Bayuga, S.J., and Beavo, J.A. Cloning and characterization of a cAMP-specific cyclic nucleotide phosphodiesterase. *Proc. Natl. Acad. Sci. USA* **95**, 8991-8996 (1998).
3. Totani, L., Piccoli, A., Dell'Elba, G., et al. Phosphodiesterases type-4 blockade prevents platelet-mediated neutrophil recruitment at the site of vascular injury. *Arterioscler. Thromb. Vasc. Biol.* **34**(8), 1689-1696 (2014).
4. Zhai, K., Hubert, F., Nicolas, V., et al. β-Adrenergic cAMP signals are predominantly regulated by phosphodiesterase type 4 in cultured adult rat aortic smooth muscle cells. *PLoS One* **7**(10), 1-13 (2012).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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